FIG. 1

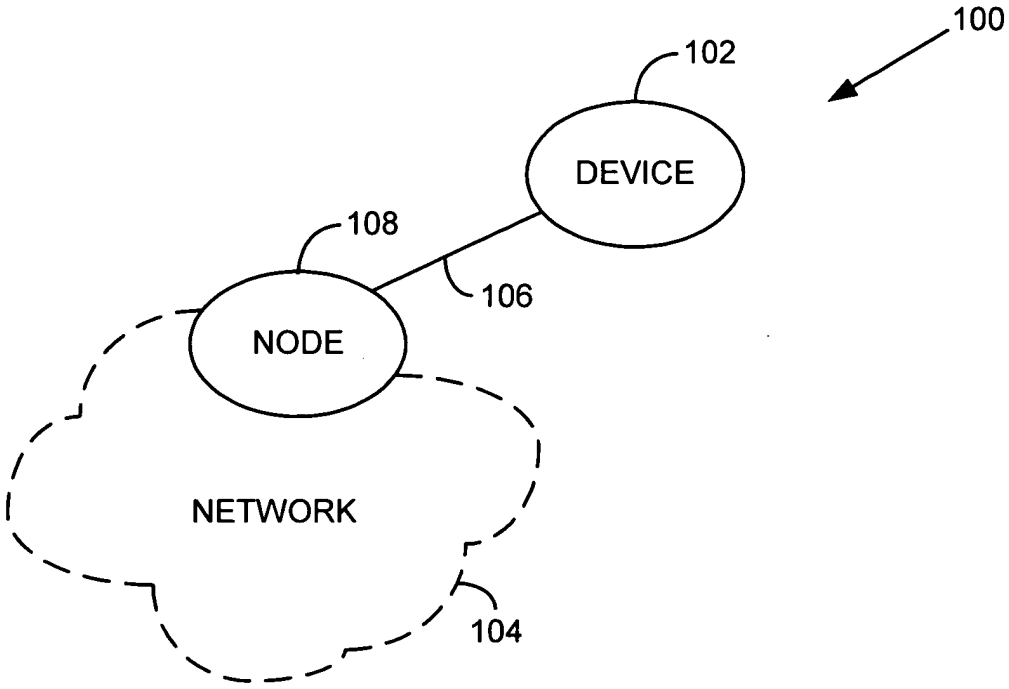

100
102
DEVICE
108
106
NODE
NETWORK
104

FIG. 2

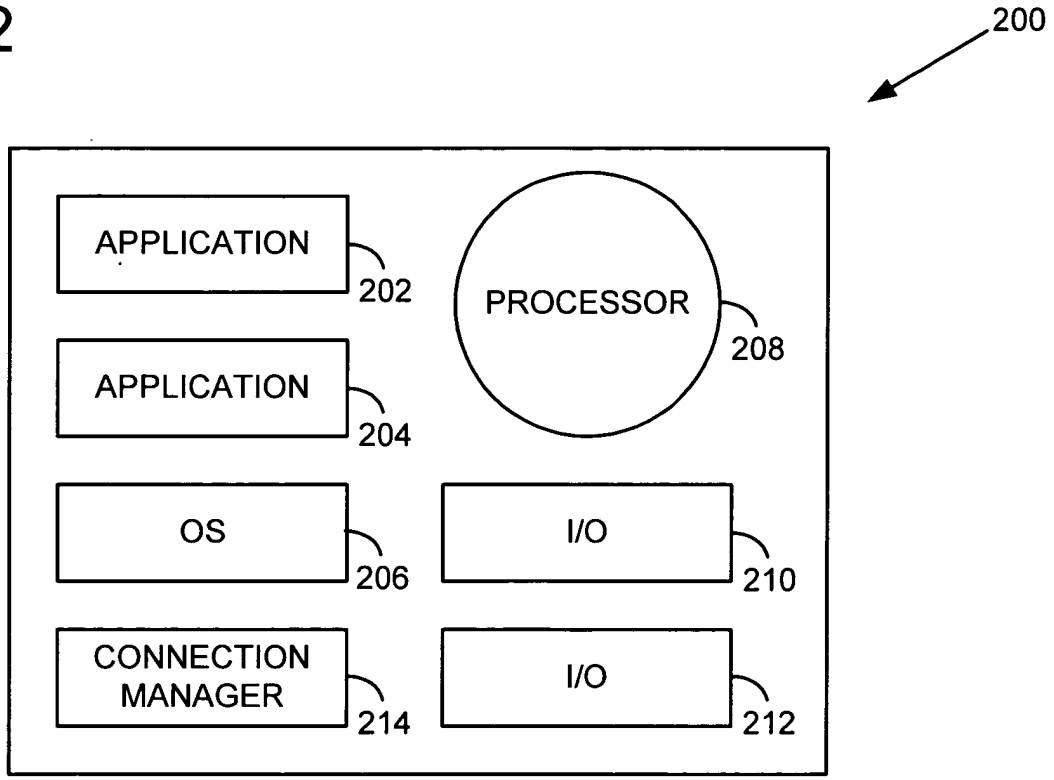

200
APPLICATION
202
APPLICATION
204
PROCESSOR
208
OS
206
I/O
210
CONNECTION MANAGER
214
I/O
212

FIG. 3

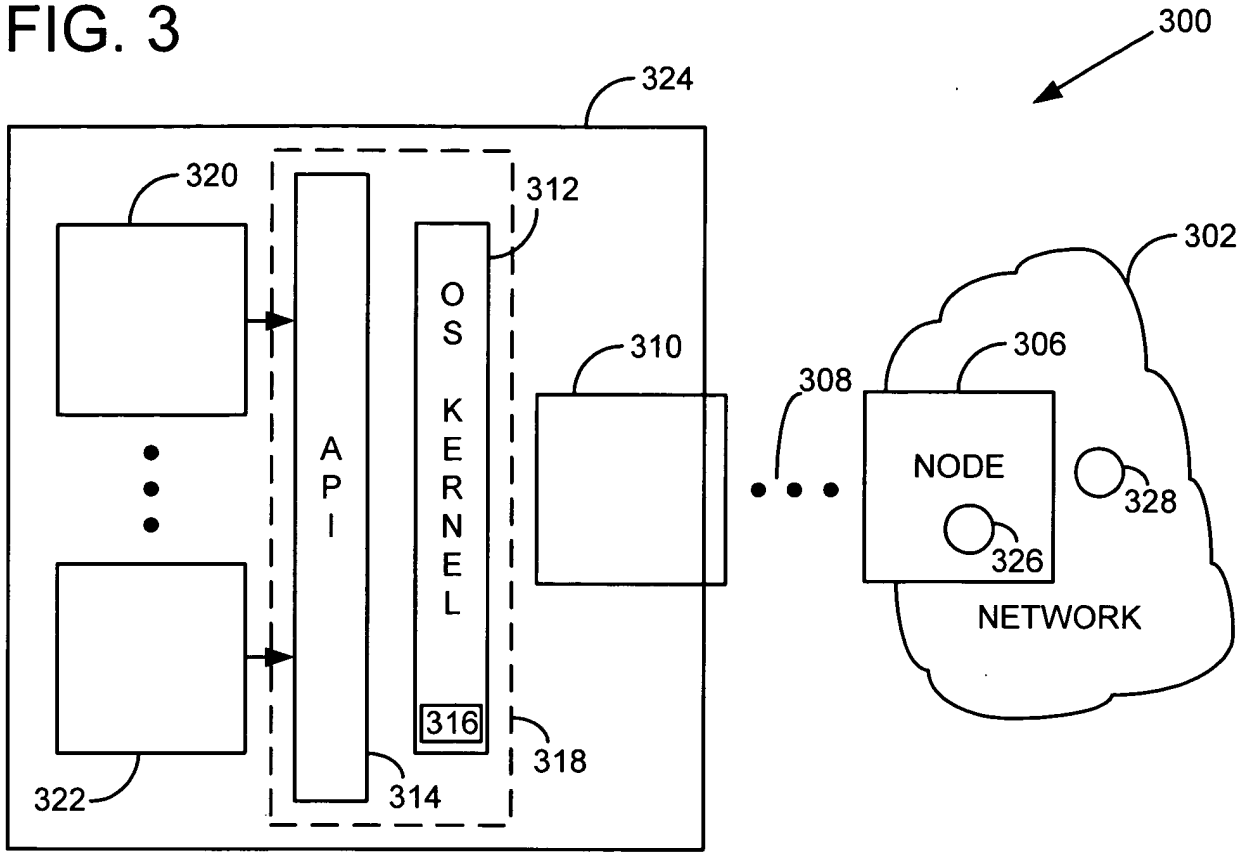

300
324
320
312
302
310
306
308
OS KERNEL
API
NODE
328
326
NETWORK
316
318
322
314

FIG. 4

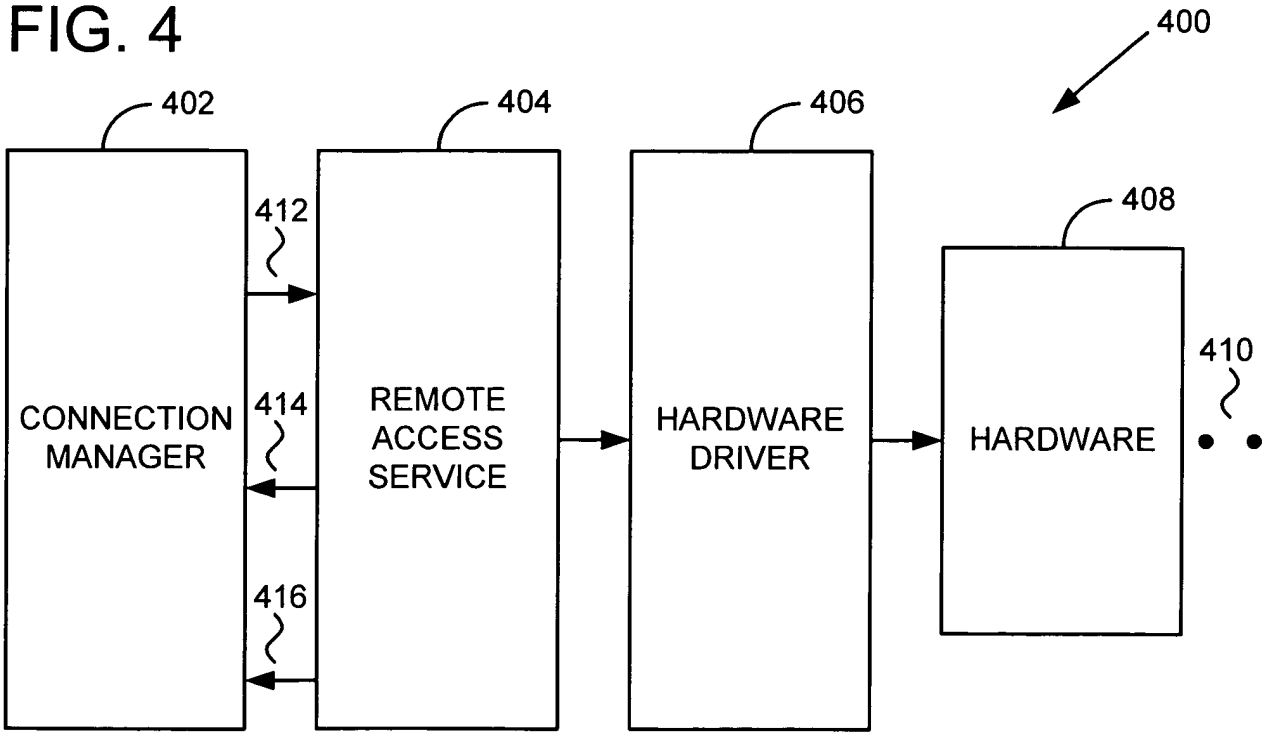

400
402
404
406
412
408
410
CONNECTION MANAGER
414
REMOTE ACCESS SERVICE
HARDWARE DRIVER
HARDWARE
416

FIG. 5

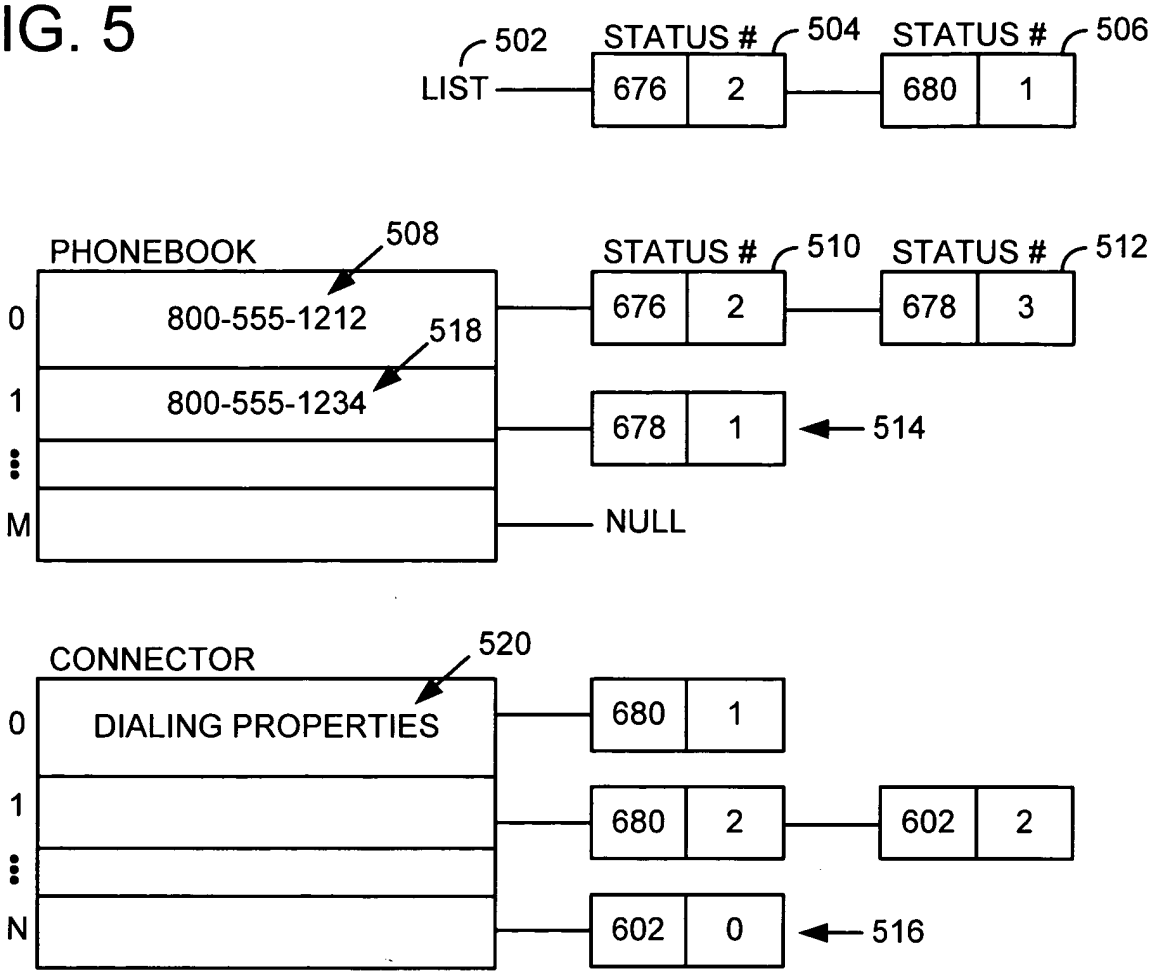

502
LIST
STATUS #
504
676
2
STATUS #
506
680
1
PHONEBOOK
508
0
800-555-1212
518
1
800-555-1234
M
STATUS #
510
676
2
STATUS #
512
678
3
678
1
514
NULL
CONNECTOR
520
0
DIALING PROPERTIES
1
N
680
1
680
2
602
2
602
0
516

FIG. 6

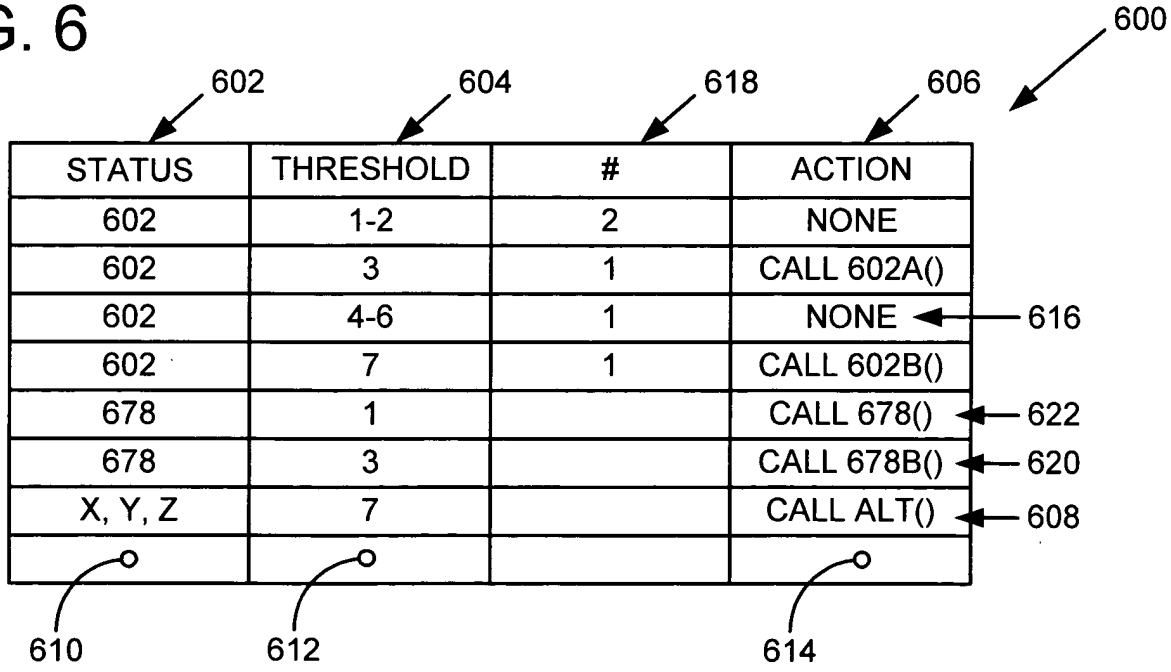

600
602
604
618
606
STATUS
THRESHOLD
#
ACTION
602
1-2
2
NONE
602
3
1
CALL 602A()
602
4-6
1
NONE
616
602
7
1
CALL 602B()
678
1
CALL 678()
622
678
3
CALL 678B()
620
X, Y, Z
7
CALL ALT()
608
610
612
614

FIG. 7

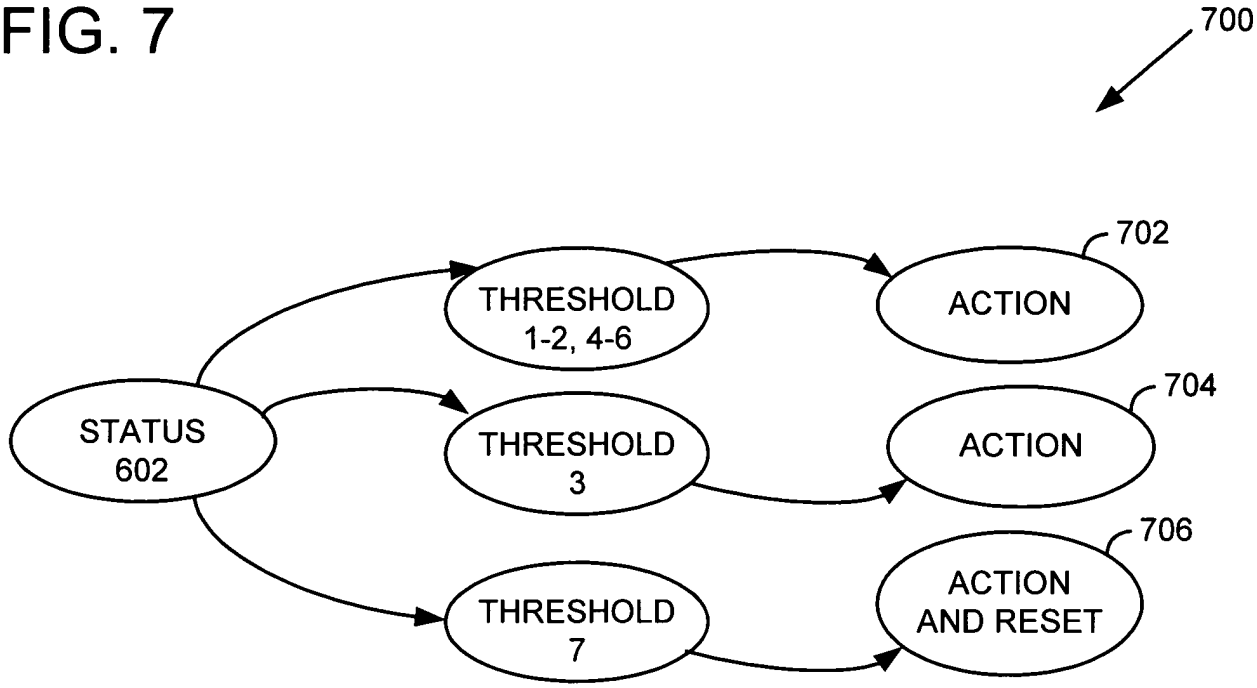

700
STATUS
602
THRESHOLD
1-2, 4-6
THRESHOLD
3
THRESHOLD
7
ACTION
702
ACTION
704
ACTION
AND RESET
706

FIG. 8

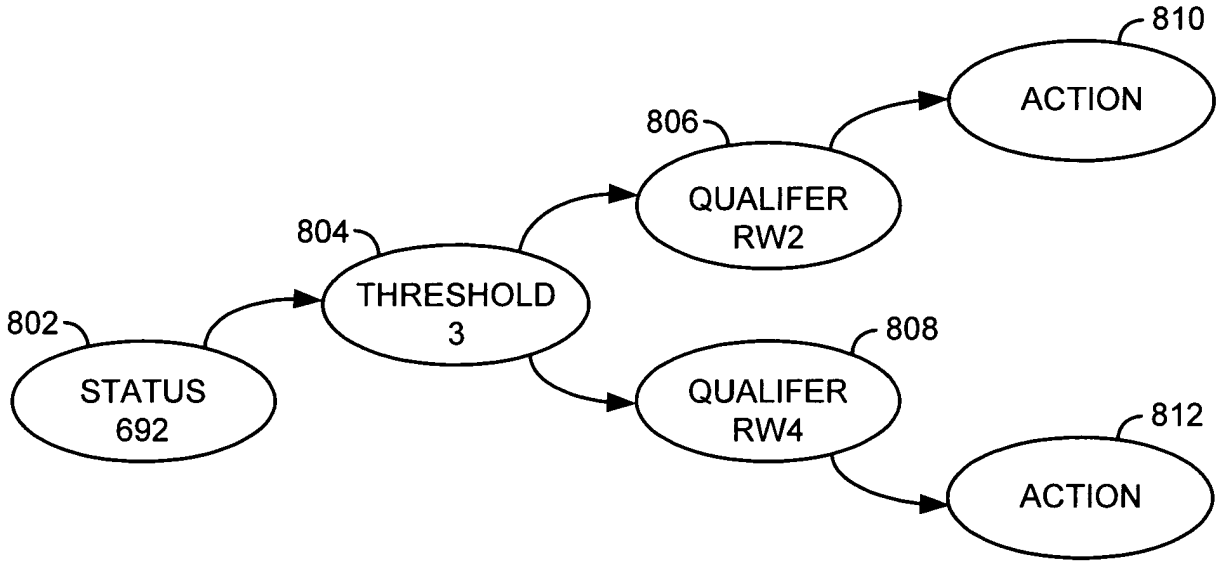
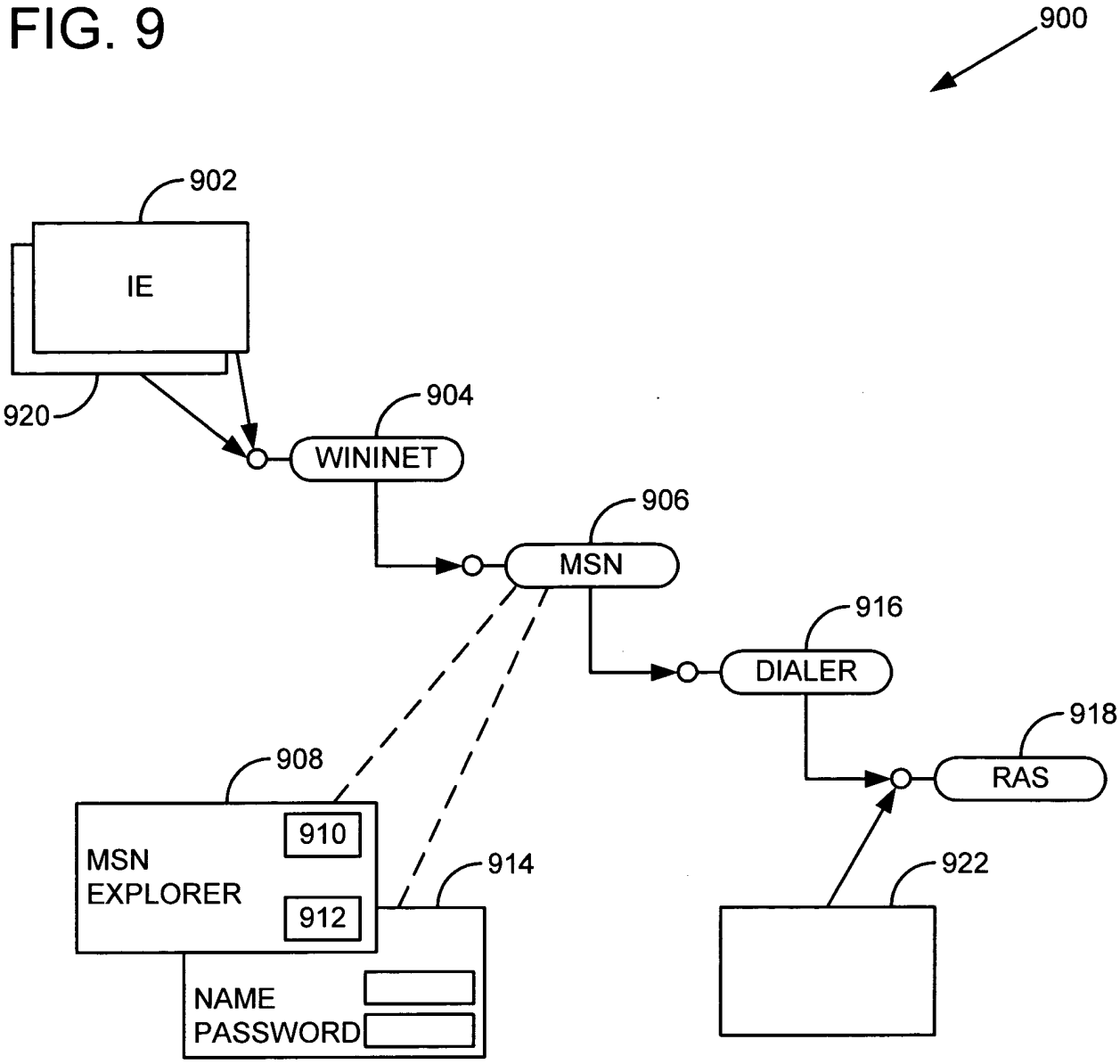

802
STATUS
692
804
THRESHOLD
3
806
QUALIFER
RW2
808
QUALIFER
RW4
810
ACTION
812
ACTION

FIG. 9


900
902
IE
920
904
WININET
906
MSN
916
DIALER
918
RAS
908
910
MSN
EXPLORER
912
914
NAME
PASSWORD
922

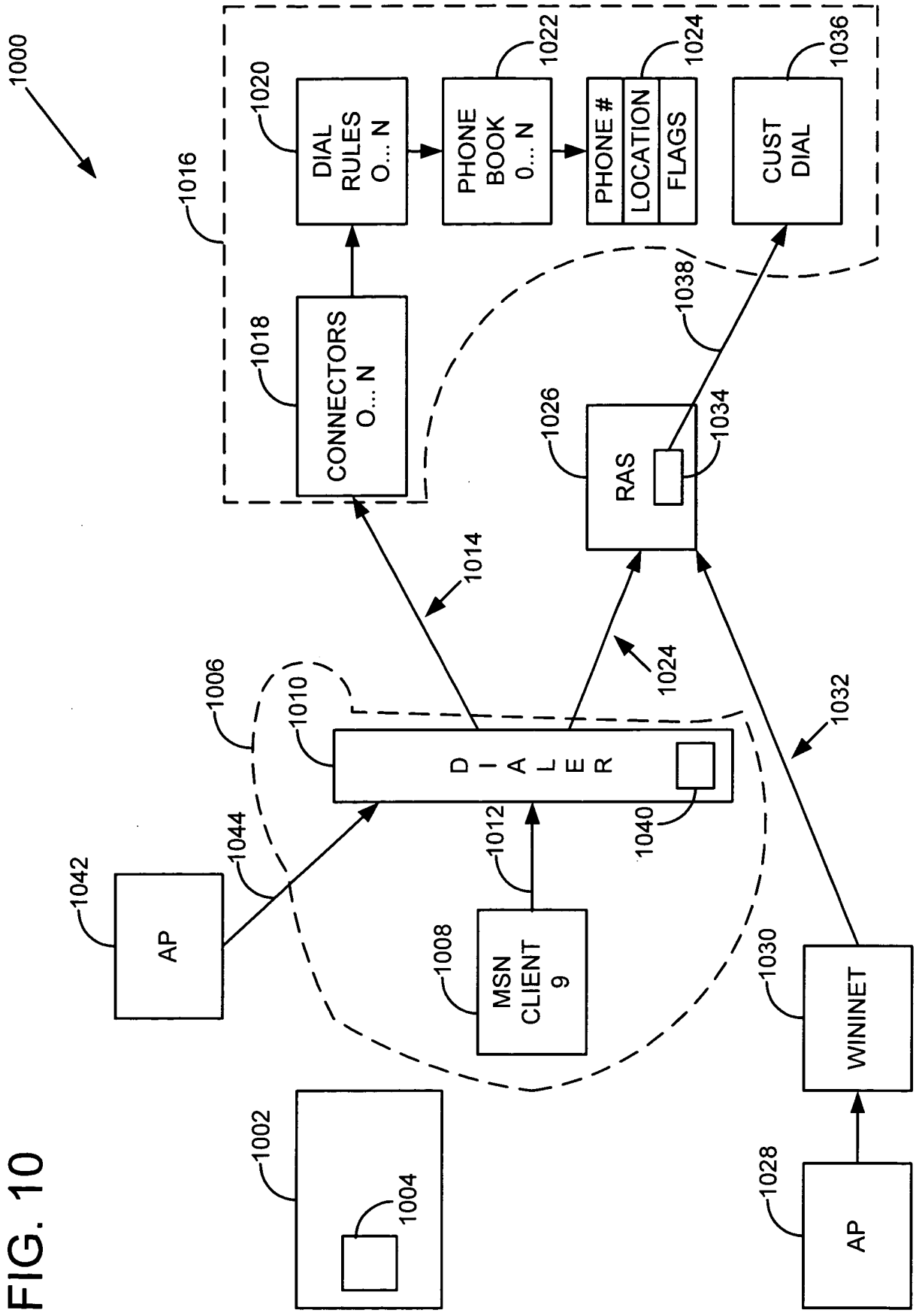

1000
1016
1020
DIAL RULES O... N
1022
PHONE BOOK 0... N
1024
PHONE #
LOCATION
FLAGS
1036
CUST DIAL
1018
CONNECTORS O... N
1038
1026
RAS
1034
1014
1024
1006
1010
D A L E R
1032
1044
1012
1040
1042
AP
1008
MSN CLIENT 9
1030
WININET
1002
1004
1028
AP

FIG. 10

FIG. 11

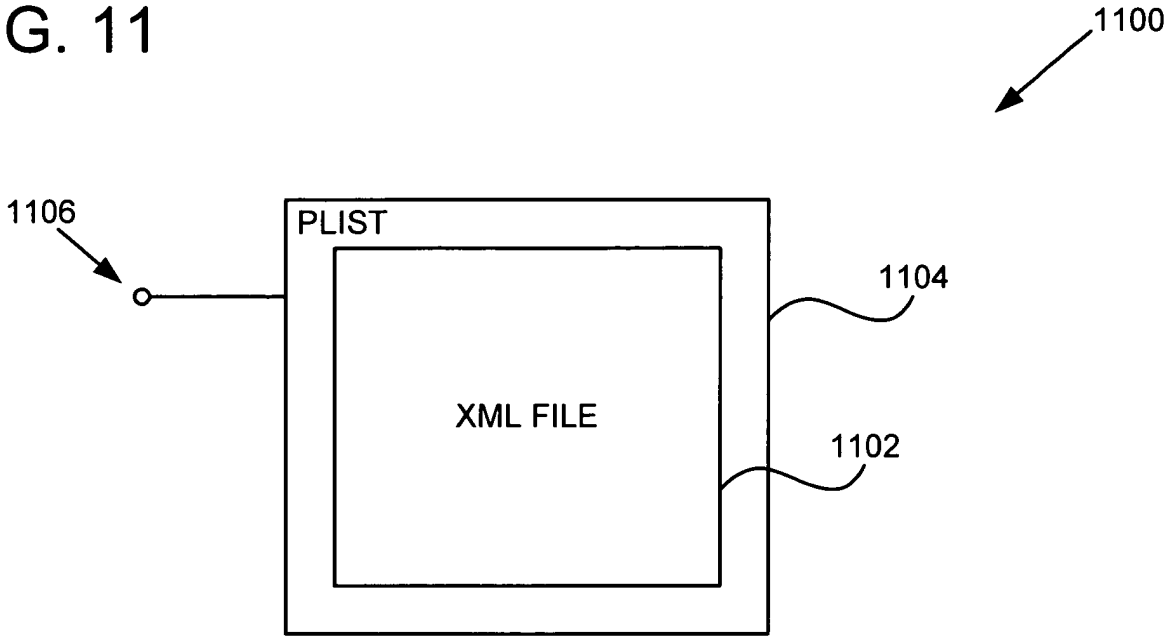


FIG. 12

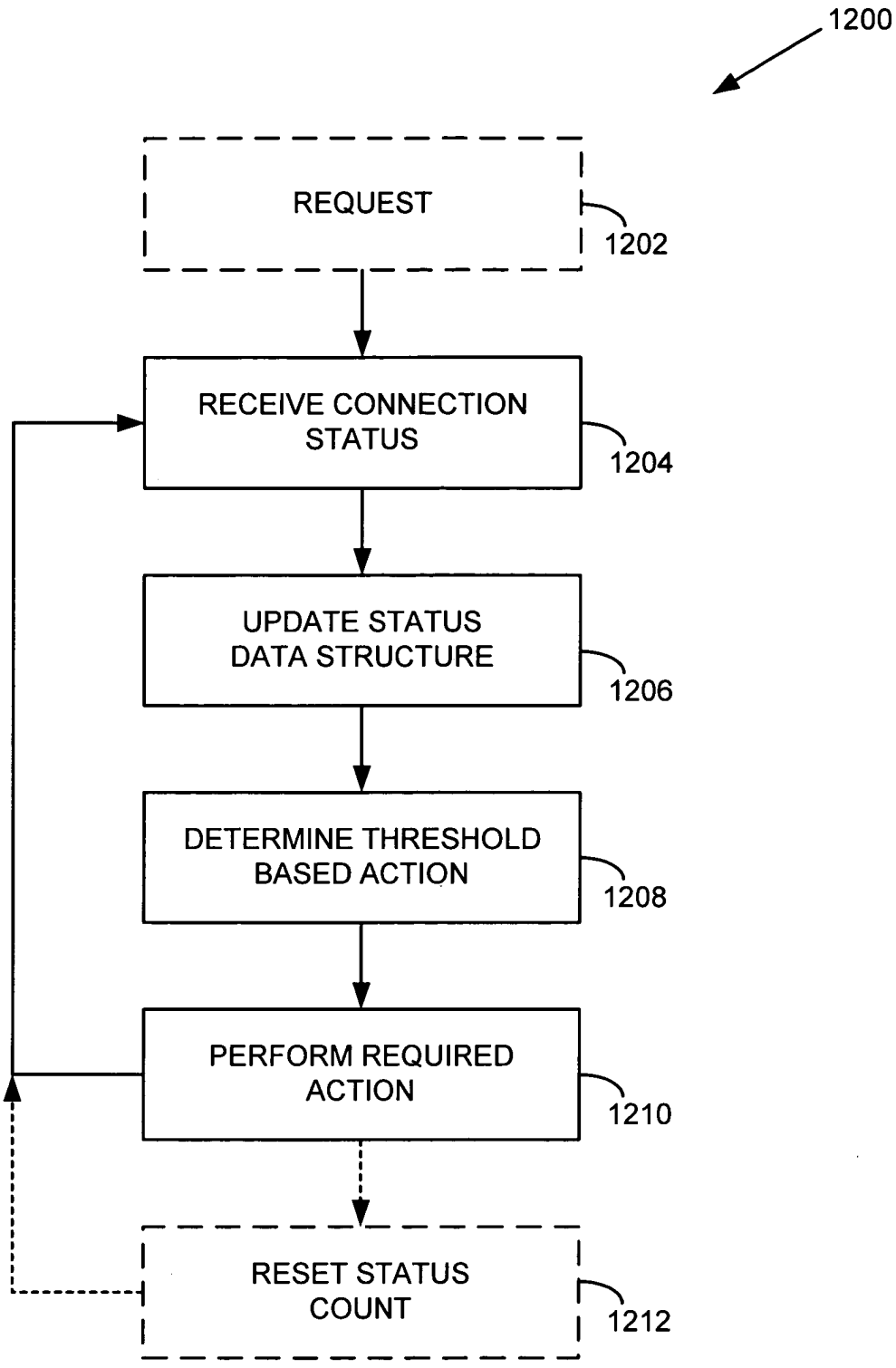

1200
REQUEST
1202
RECEIVE CONNECTION STATUS
1204
UPDATE STATUS DATA STRUCTURE
1206
DETERMINE THRESHOLD BASED ACTION
1208
PERFORM REQUIRED ACTION
1210
RESET STATUS COUNT
1212

FIG. 13

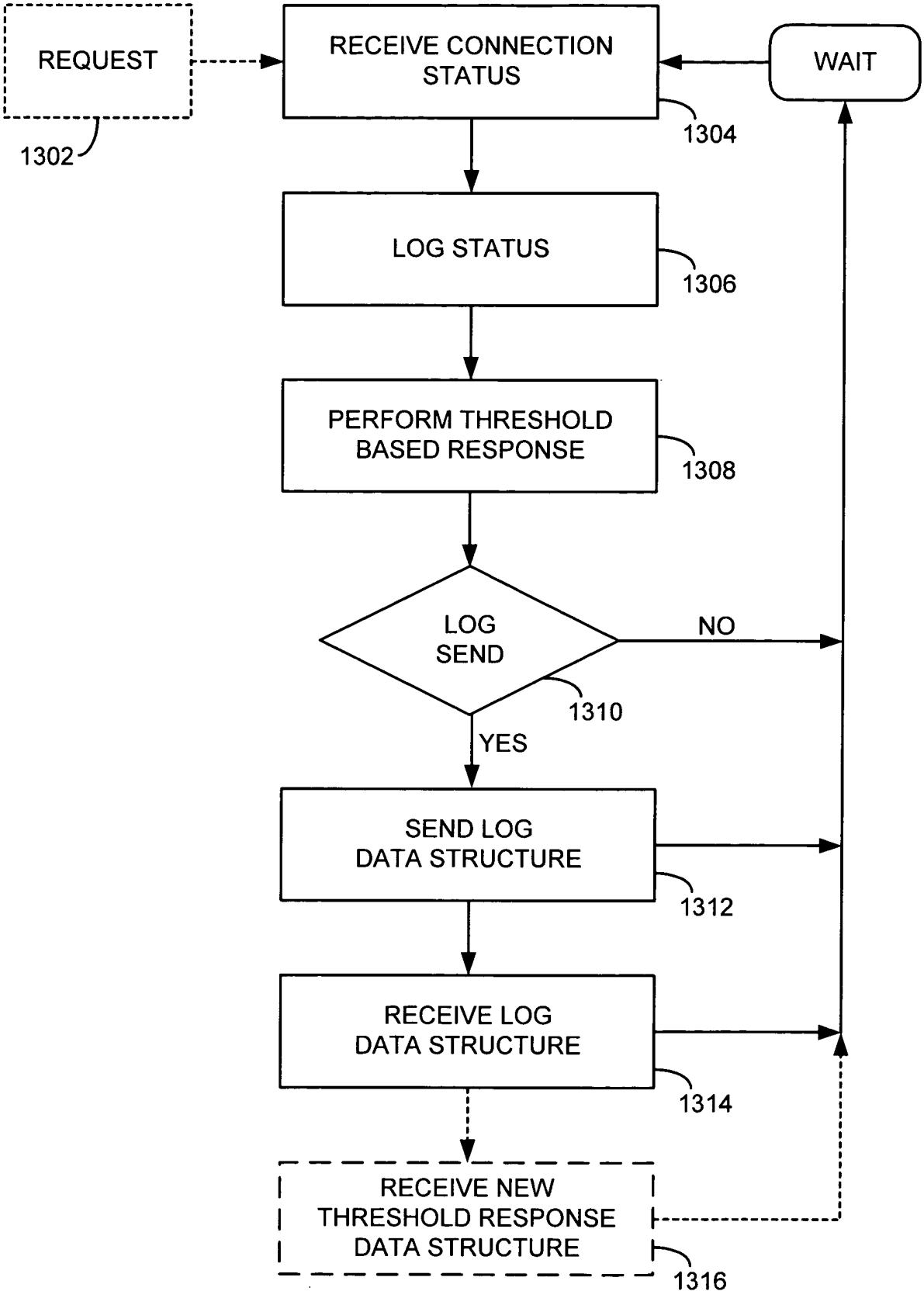

REQUEST
1302
RECEIVE CONNECTION STATUS
1304
WAIT
LOG STATUS
1306
PERFORM THRESHOLD BASED RESPONSE
1308
LOG SEND
1310
NO
YES
SEND LOG DATA STRUCTURE
1312
RECEIVE LOG DATA STRUCTURE
1314
RECEIVE NEW THRESHOLD RESPONSE DATA STRUCTURE
1316

FIG. 14

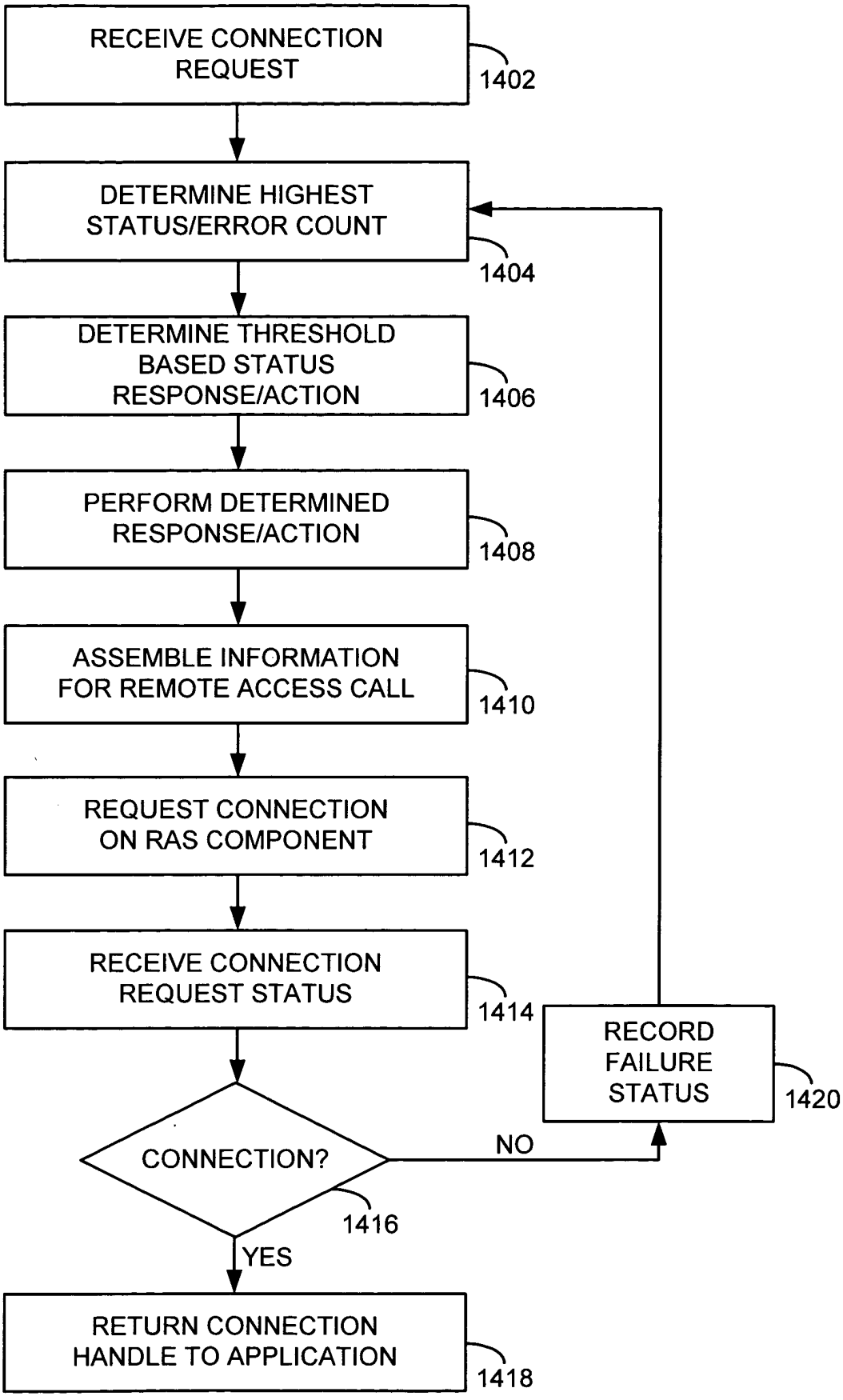

RECEIVE CONNECTION REQUEST
1402
DETERMINE HIGHEST STATUS/ERROR COUNT
1404
DETERMINE THRESHOLD BASED STATUS RESPONSE/ACTION
1406
PERFORM DETERMINED RESPONSE/ACTION
1408
ASSEMBLE INFORMATION FOR REMOTE ACCESS CALL
1410
REQUEST CONNECTION ON RAS COMPONENT
1412
RECEIVE CONNECTION REQUEST STATUS
1414
RECORD FAILURE STATUS
1420
CONNECTION?
1416
NO
YES
RETURN CONNECTION HANDLE TO APPLICATION
1418

FIG. 15

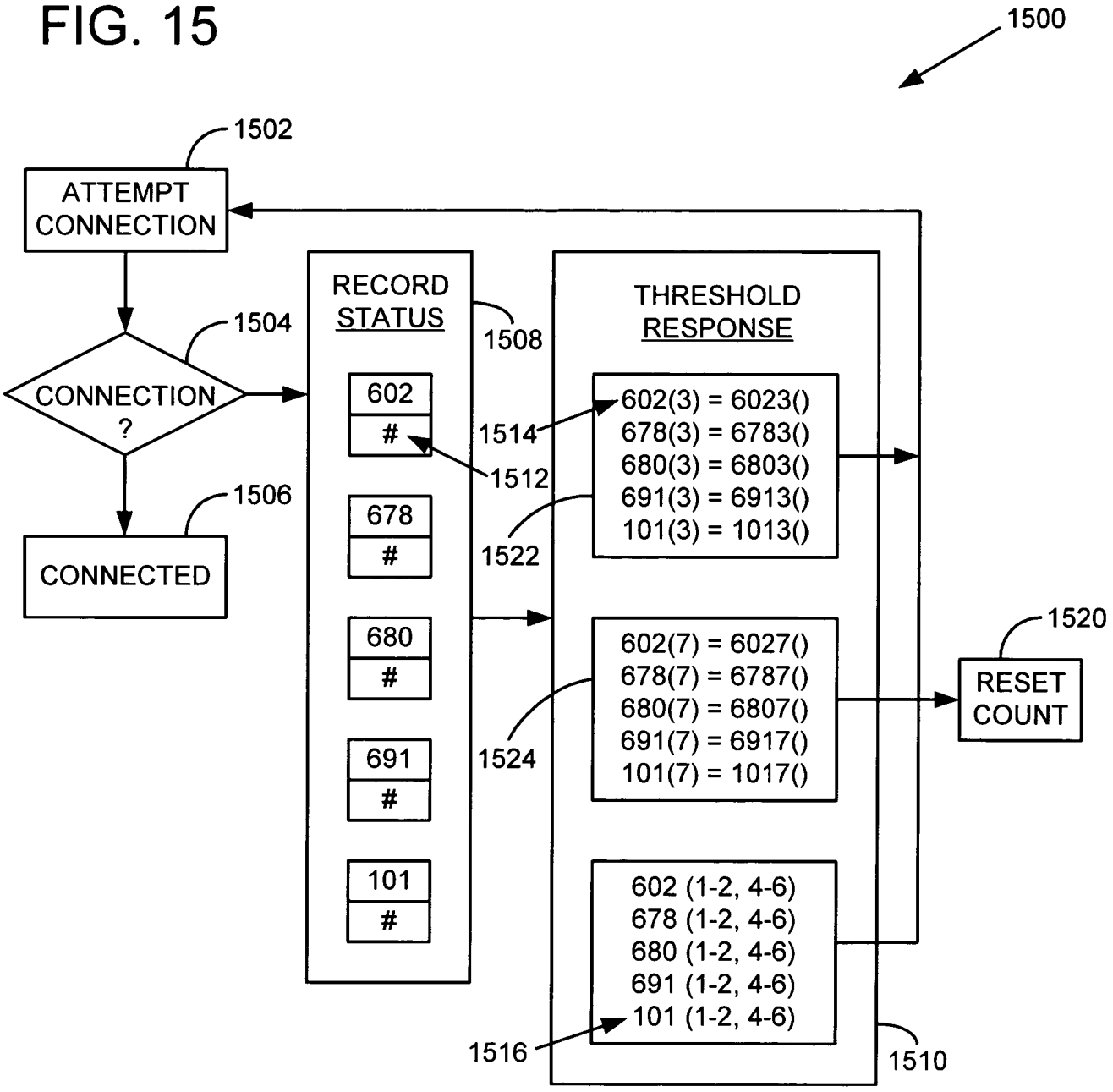

1500
1502
ATTEMPT CONNECTION
1504
CONNECTION ?
1506
CONNECTED
RECORD STATUS
1508
602
#
678
#
680
#
691
#
101
#
1512
1514
1522
1524
1516
THRESHOLD RESPONSE
602(3) = 6023()
678(3) = 6783()
680(3) = 6803()
691(3) = 6913()
101(3) = 1013()
602(7) = 6027()
678(7) = 6787()
680(7) = 6807()
691(7) = 6917()
101(7) = 1017()
602 (1-2, 4-6)
678 (1-2, 4-6)
680 (1-2, 4-6)
691 (1-2, 4-6)
101 (1-2, 4-6)
1510
1520
RESET COUNT

FIG. 16

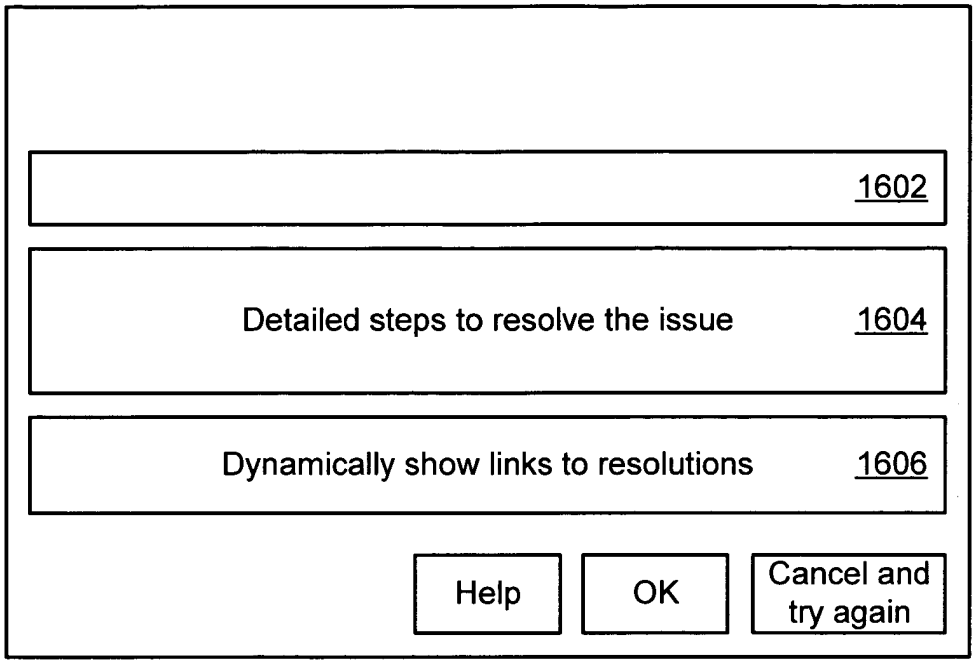

1602
Detailed steps to resolve the issue
1604
Dynamically show links to resolutions
1606
Help
OK
Cancel and try again

FIG. 17

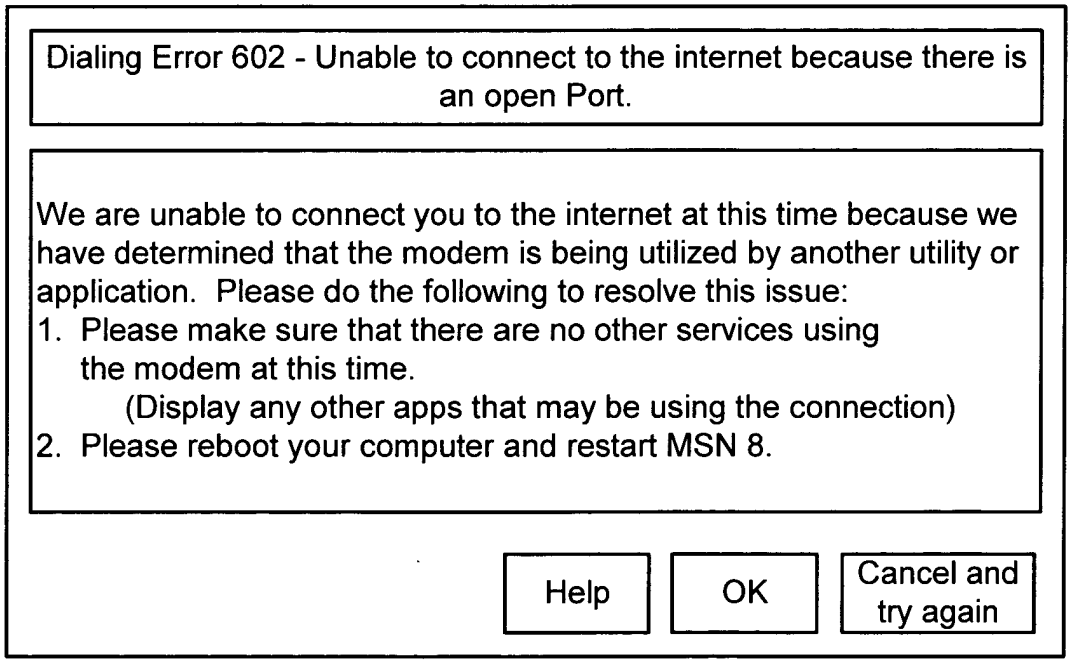

Dialing Error 602 - Unable to connect to the internet because there is an open Port.
We are unable to connect you to the internet at this time because we have determined that the modem is being utilized by another utility or application. Please do the following to resolve this issue:
1. Please make sure that there are no other services using the modem at this time.
(Display any other apps that may be using the connection)
2. Please reboot your computer and restart MSN 8.
Help
OK
Cancel and try again

FIG. 18

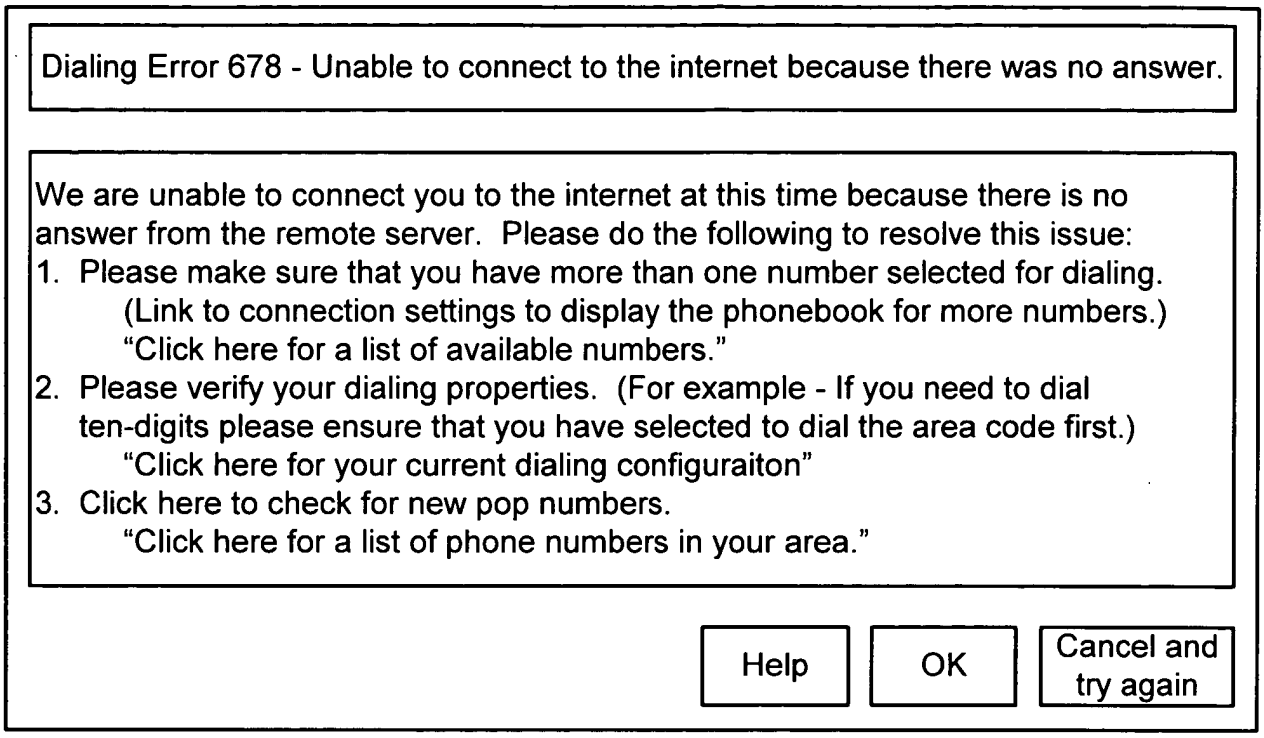

Dialing Error 678 - Unable to connect to the internet because there was no answer.
We are unable to connect you to the internet at this time because there is no answer from the remote server. Please do the following to resolve this issue:
1. Please make sure that you have more than one number selected for dialing.
(Link to connection settings to display the phonebook for more numbers.)
"Click here for a list of available numbers."
2. Please verify your dialing properties. (For example - If you need to dial ten-digits please ensure that you have selected to dial the area code first.)
"Click here for your current dialing configuraiton"
3. Click here to check for new pop numbers.
"Click here for a list of phone numbers in your area."
Help
OK
Cancel and try again

FIG. 19

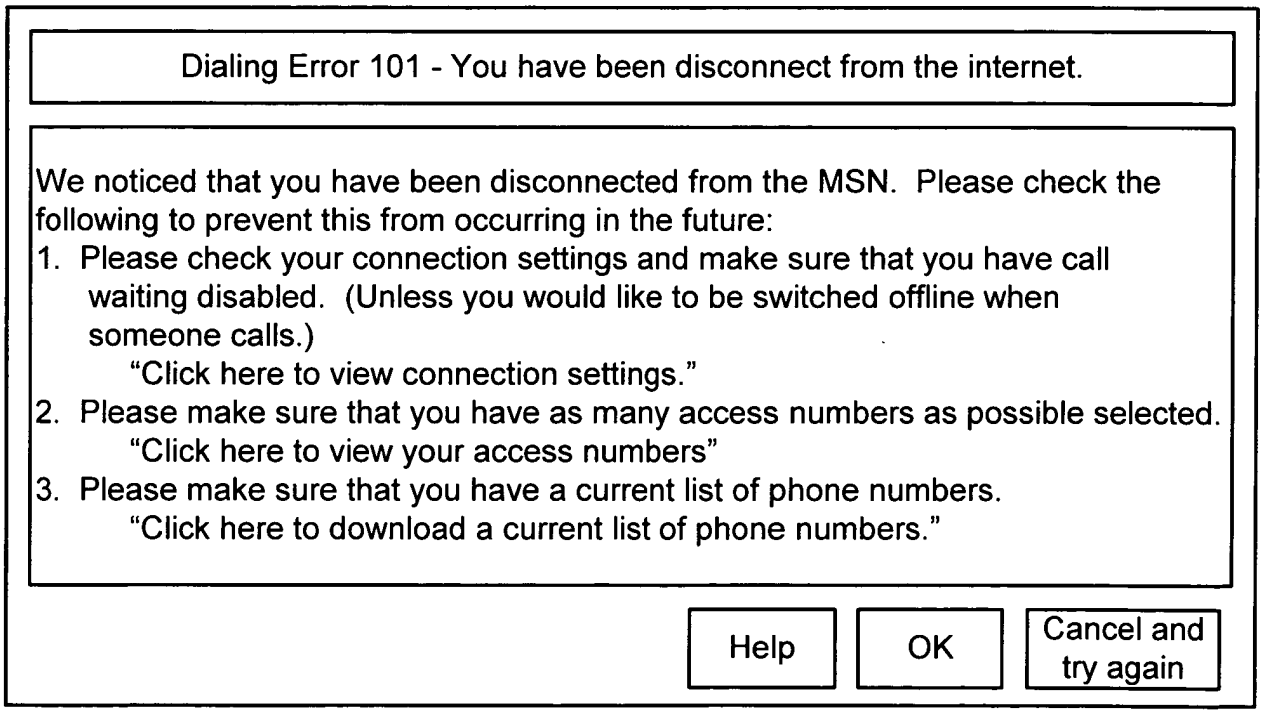

Dialing Error 101 - You have been disconnect from the internet.
We noticed that you have been disconnected from the MSN. Please check the following to prevent this from occurring in the future:
1. Please check your connection settings and make sure that you have call waiting disabled. (Unless you would like to be switched offline when someone calls.)
"Click here to view connection settings."
2. Please make sure that you have as many access numbers as possible selected.
"Click here to view your access numbers"
3. Please make sure that you have a current list of phone numbers.
"Click here to download a current list of phone numbers."
Help
OK
Cancel and try again

FIG. 20

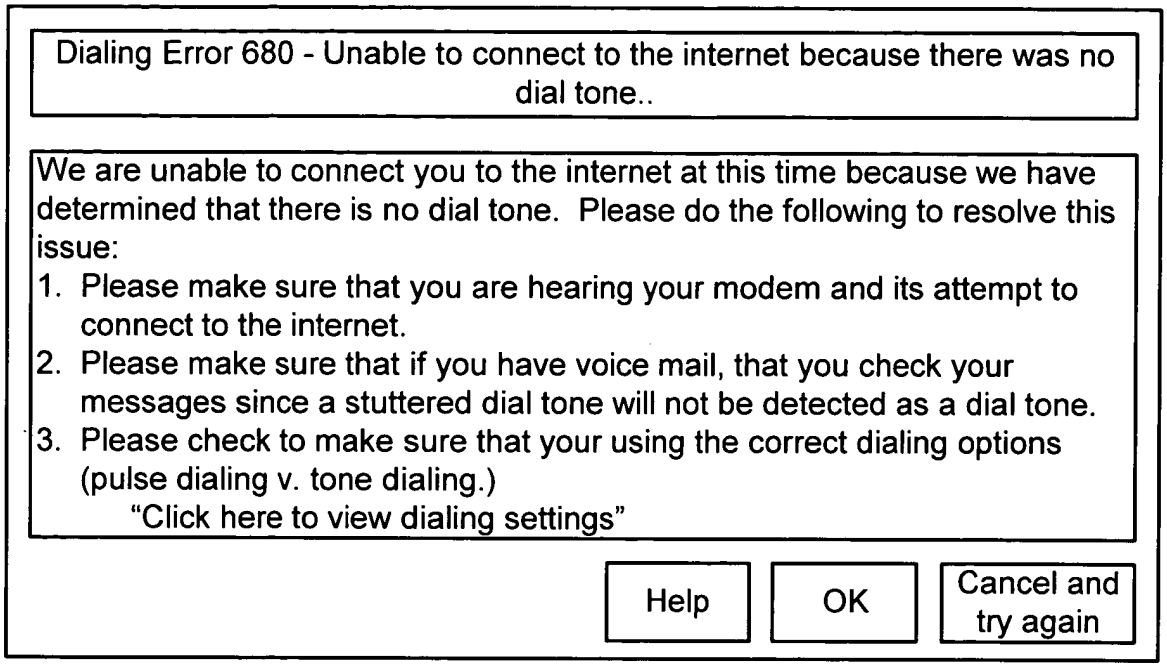

Dialing Error 680 - Unable to connect to the internet because there was no dial tone..
We are unable to connect you to the internet at this time because we have determined that there is no dial tone. Please do the following to resolve this issue:
1. Please make sure that you are hearing your modem and its attempt to connect to the internet.
2. Please make sure that if you have voice mail, that you check your messages since a stuttered dial tone will not be detected as a dial tone.
3. Please check to make sure that your using the correct dialing options (pulse dialing v. tone dialing.)
"Click here to view dialing settings"
Help
OK
Cancel and try again

FIG. 21

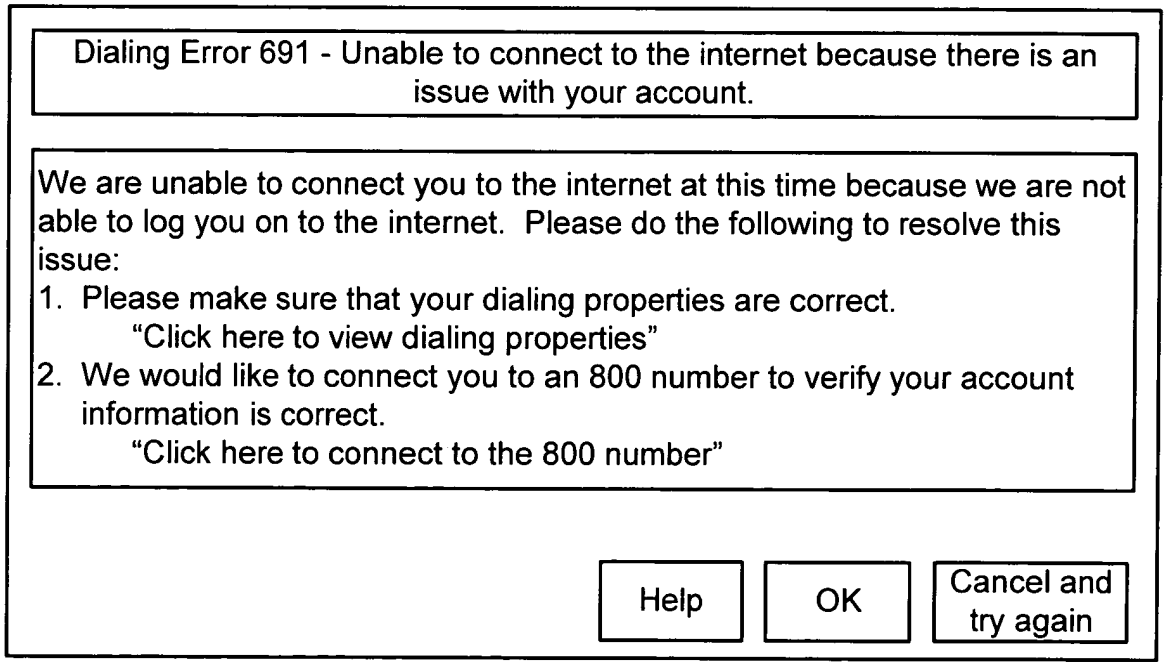
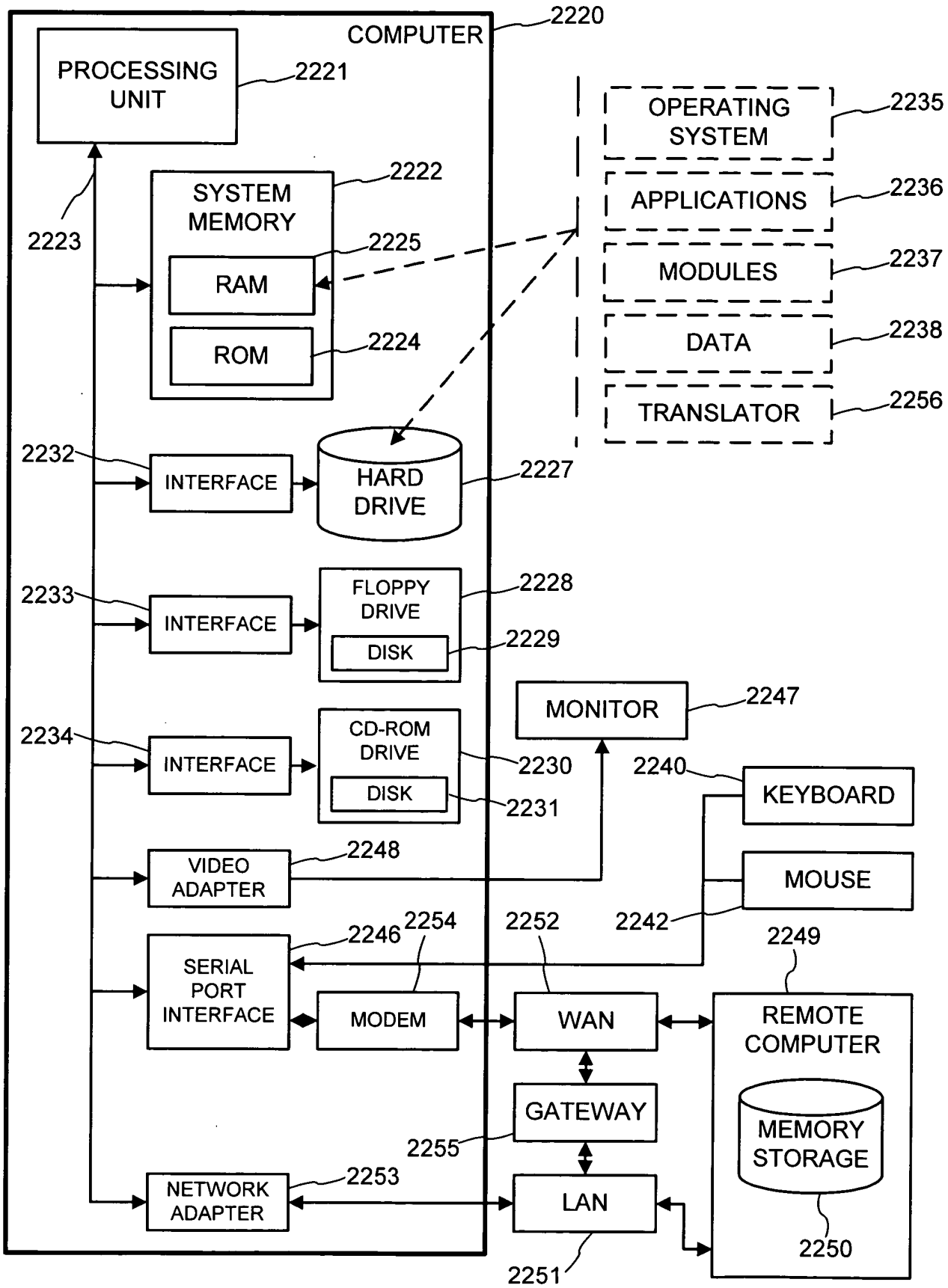

Dialing Error 691 - Unable to connect to the internet because there is an issue with your account.
We are unable to connect you to the internet at this time because we are not able to log you on to the internet. Please do the following to resolve this issue:
1. Please make sure that your dialing properties are correct.
"Click here to view dialing properties"
2. We would like to connect you to an 800 number to verify your account information is correct.
"Click here to connect to the 800 number"
Help
OK
Cancel and try again

FIG. 22


COMPUTER
2220
PROCESSING UNIT
2221
SYSTEM MEMORY
2222
2223
RAM
2225
ROM
2224
OPERATING SYSTEM
2235
APPLICATIONS
2236
MODULES
2237
DATA
2238
TRANSLATOR
2256
2232
INTERFACE
HARD DRIVE
2227
2233
INTERFACE
FLOPPY DRIVE
2228
DISK
2229
2234
INTERFACE
CD-ROM DRIVE
2230
DISK
2231
MONITOR
2247
2240
KEYBOARD
MOUSE
2242
VIDEO ADAPTER
2248
SERIAL PORT INTERFACE
2246
2254
2252
2249
MODEM
WAN
REMOTE COMPUTER
GATEWAY
2255
MEMORY STORAGE
2250
NETWORK ADAPTER
2253
LAN
2251